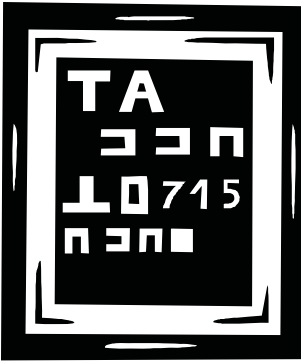


# MACULAR DEGENERATION



AGE-RELATED Macular Degeneration (AMD) is one of the leading causes of irreversible central vision loss in individuals over the age of 50 in the U.S. The incidence and progression of all the features of AMD is known to increase significantly with age.

Macular degeneration results from damage to the macula, which is the central part of the retina (the nerve tissue that lines the back of the eye). The macula is responsible for central vision and the ability to see detail. When the macula is damaged, the eye loses its capability to identify fine detail, read small print, and recognize faces.

Damaged regions can cause localized areas of vision loss, making objects in your field of vision fade or disappear. Straight lines or edges may also appear wavy.

Although the extent of central vision loss can be significant, macular degeneration alone rarely causes total blindness. Since the macula is only a very small part of the retina peripheral (side) vision is usually maintained.

There are two forms of Macular Degeneration, Dry (Atrophic) and Wet (Neovascular/Exudative). Dry Macular Degeneration is more common than Wet AMD and accounts for 90% of all cases of AMD. At this time, there is no treatment that can halt the progression of dry macular degeneration related vision loss. However, there is ongoing research funded by the National Eye Institute (NEI). For more information, visit their website [www.nei.nih.gov](http://www.nei.nih.gov). Wet Macular Degeneration is the less common form, but more severe, than dry macular degeneration and the onset may be more sudden and the progression more rapid. Wet macular degeneration accounts for approximately 10% of all AMD cases.

## Understand your risk

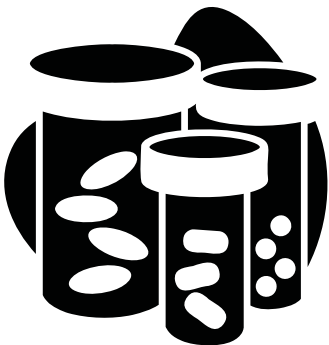
- Aging - Approximately 10% of patients 66 to 74 years of age will have findings of AMD. The prevalence increases to 30% in patients 75 to 85 years of age.
- Smoking - The only environmental exposure clearly associated with AMD is smoking tobacco.
- Family History - Macular degeneration appears to be hereditary in some families. Approximately 24 percent of all late stage AMD appears to have a genetic basis.
- Gender – AMD is more common in women.
- Sunlight exposure - Several studies have suggested that blue light, the visible component of sunlight, may play a role in the development of AMD.

## Your Eyes Are What You Eat

Individuals suffering from Age-Related Macular Degeneration (AMD) often face the harsh reality of being unable to read, write, recognize faces or drive a car. There currently is no cure and the condition typically worsens over time. However, with research always comes new hope to better understand AMD and find ways to improve the condition or stop it altogether.

Research suggests that antioxidant vitamins, such as beta-carotene (vitamin A) and vitamins C and E, may protect the macula from damage. The Age Related Disease Study (AREDS), sponsored by the National Eye Institute, involving more than 3,600 people found that supplementation with vitamins C and E, beta-carotene and zinc reduced patients' risk of progressing to advanced AMD by about 28%.

Because of their findings, the researchers recommend that patients at risk of developing advanced AMD consider taking antioxidant and zinc supplements. Always check with your physician before using any types of supplements. Participants received:



- 500 milligrams (mg) of vitamin C
- 400 international units (IU) vitamin E
- 15 mg of beta-carotene
- 80 mg of zinc oxide

Another study recently published in the Journal of the American Medical Association shared the results of an eight-year study involving more than 4,000 older residents of Rotterdam, the Netherlands. It found that individuals with diets that had a higher dietary intake of beta-carotene, zinc, and vitamins C and E, showed evidence of a substantially reduced risk of AMD.

The study emphasized a diet rich in foods with vitamin E, C, high concentrations of zinc and beta-carotene. Foods rich in vitamin E include: whole grains, vegetable oil, eggs and nuts. High concentrations of zinc can be found in meat, poultry, fish, whole grains, and dairy products. Vitamin C is found in citrus fruits and juices, green peppers, broccoli and potatoes, while carrots, spinach and kale are great sources of beta-carotene.

More study is needed, especially for the long-term effects of high-dose supplementation. Keep in mind, that too much of any vitamin or mineral may affect the body's ability to absorb other important nutrients, so follow your doctor's advice about dosage, and consult with him/her before making any changes in your diet. If you have any concerns about your vision please consult your eye care physician.

*Sources: JAMA, All About Eyes, Reuters*

## The Road Ahead



Currently, there is no treatment that can cure Macular Degeneration. New treatments may prevent further vision loss for patients with wet (or exudative) AMD. Talk to your eye doctor about prescription injections.

In the early stages of Macular Degeneration the sensitivity of the retina centrally will be reduced. This means that in order to read text the print will have to be larger and with more contrast. There are many visual aids that allow for magnification and contrast enhancement. See other monographs in our

Educational Series, “Enhancing Low Vision: Magnification and Magnifiers,” and “Closed Circuit Televisions (CCTVs).”

## **Where To Get More Information**

For additional resources and information, contact your eye care physician, CSBPS Low Vision professional staff, The Association for Macular Diseases, Inc. (210 East 64th Street, New York, NY 11021, (212-605-3719)), or visit [www.agingeye.net](http://www.agingeye.net) or [www.csbps.com](http://www.csbps.com).

## **C • S • B • P • S**

### **Programs and Services**

- Low vision clinic and low vision rehabilitation
- Instruction in independent living skills
- Professional counseling and support groups
- Safe travel and orientation training
- Education, information and referral services
- Assistive Technology resources
- Adaptive aids specialty store, SightConnection

Since 1965, our mission has been to work with individuals, families and communities to restore, maintain and enhance the independence and well-being of people with impaired vision.

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Agency hours: 8 AM – 5 PM, M-F

SightConnection Store hours: 9 AM - 5 PM, M-F

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